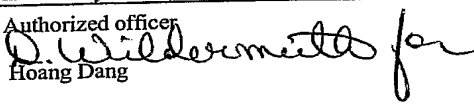


# PATENT COOPERATION TREATY

## PCT

### INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 25791.308.02	<b>FOR FURTHER ACTION</b>		See Form PCT/IPEA/416																								
International application No. PCT/US04/28831	International filing date (day/month/year) 07 September 2004 (07.09.2004)	Priority date (day/month/year) 05 September 2003 (05.09.2003)																									
International Patent Classification (IPC) or national classification and IPC IPC: <b>E21B 23/00</b> ( 2006.01) USPC: 166/380,382,207,242.1																											
Applicant ENVENTURE GLOBAL TECHNOLOGY, INC.																											
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>5</u> sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p style="margin-left: 20px;">a. <input type="checkbox"/> (sent to the applicant and to the International Bureau) a total of <u>53</u> sheets, as follows:</p> <p style="margin-left: 40px;"><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p style="margin-left: 40px;"><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p style="margin-left: 20px;">b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in electronic form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>																											
<p>4. This report contains indications relating to the following items:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 10%; text-align: center;"><input checked="" type="checkbox"/></td> <td style="width: 20%;">Box No. I</td> <td>Basis of the report</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Box No. II</td> <td>Priority</td> </tr> <tr> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td>Box No. III</td> <td>Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</td> </tr> <tr> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td>Box No. IV</td> <td>Lack of unity of invention</td> </tr> <tr> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td>Box No. V</td> <td>Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Box No. VI</td> <td>Certain documents cited</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Box No. VII</td> <td>Certain defects in the international application</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Box No. VIII</td> <td>Certain observations on the international application</td> </tr> </table>				<input checked="" type="checkbox"/>	Box No. I	Basis of the report	<input type="checkbox"/>	Box No. II	Priority	<input checked="" type="checkbox"/>	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability	<input checked="" type="checkbox"/>	Box No. IV	Lack of unity of invention	<input checked="" type="checkbox"/>	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement	<input type="checkbox"/>	Box No. VI	Certain documents cited	<input type="checkbox"/>	Box No. VII	Certain defects in the international application	<input type="checkbox"/>	Box No. VIII	Certain observations on the international application
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Date of submission of the demand 05 April 2005 (05.04.2005)		Date of completion of this report 22 January 2007 (22.01.2007)																									
Name and mailing address of the IPEA/ US Mail Stop PCT, Attn: IPEA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (571) 273-3201		Authorized officer  Hoang Dang Telephone No. 571-272-3600																									

# INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/US20/04028831

## Box No. I Basis of the report

1. With regard to the **language**, this report is based on:

- ☒ the international application in the language in which it was filed.
- ☐ a translation of the international application into English, which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
  - ☐ publication of the international application (under Rule 12.4(a))
  - ☐ international preliminary examination (under Rules 55.2(a) and/or 55.3(a))

2. With regard to the **elements** of the international application, this report is based on (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report*):

- ☐ the international application as originally filed/furnished
- ☒ the description:
- pages 1-172 as originally filed/furnished
- pages\* NONE received by this Authority on \_\_\_\_\_
- pages\* NONE received by this Authority on \_\_\_\_\_
- ☒ the claims:
- pages NONE as originally filed/furnished
- pages\* NONE as amended (together with any statement) under Article 19
- pages\* NONE received by this Authority on \_\_\_\_\_
- pages\* 173-225 received by this Authority on 17 March 2006 (17.03.2006)
- ☒ the drawings:
- pages 1-107 as originally filed/furnished
- pages\* NONE received by this Authority on \_\_\_\_\_
- pages\* NONE received by this Authority on \_\_\_\_\_
- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing.

3. ☒ The amendments have resulted in the cancellation of:

- ☒ the description, pages NONE
- ☒ the claims, Nos. 51-118, 131-136, 139, 141-193, 199-840
- ☒ the drawings, sheets/figs NONE
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to the sequence listing (*specify*): \_\_\_\_\_

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, Nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to the sequence listing (*specify*): \_\_\_\_\_

*\* If item 4 applies, some or all of those sheets may be marked "superseded."*

# INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/US20/04028831

## Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non obvious), or to be industrially applicable have not been examined in respect of:

- ☐ the entire international application
- ☒ claims Nos. 194-198 and 841-1092

because:

- ☐ the said international application, or the said claim Nos. \_\_\_\_\_ relate to the following subject matter which does not require an international preliminary examination (*specify*):
- ☐ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. \_\_\_\_\_ are so unclear that no meaningful opinion could be formed (*specify*):
- ☐ the claims, or said claims Nos. \_\_\_\_\_ are so inadequately supported by the description that no meaningful opinion could be formed (*specify*):

☒ no international search report has been established for said claims Nos. 194-198 and 841-1092

☐ a meaningful opinion could not be formed without the sequence listing; the applicant did not, within the prescribed time limit:

- ☐ furnish a sequence listing on paper complying with the standard provided for in Annex C of the Administrative Instructions, and such listing was not available to the International Preliminary Examining Authority in a form and manner acceptable to it.
- ☐ furnish a sequence listing in electronic form complying with the standard provided for in Annex C of the Administrative Instructions, and such listing was not available to the International Preliminary Examining Authority in a form and manner acceptable to it.
- ☐ pay the required late furnishing fee for the furnishing of a sequence listing in response to an invitation under Rules 13ter.1(a) or (b) and 13ter.2.

☐ a meaningful opinion could not be formed without the tables related to the sequence listings; the applicant did not, within the prescribed time limit, furnish such tables in electronic form complying with the technical requirements provided for in Annex C-bis of the Administrative Instructions, and such tables were not available to the International Preliminary Examining Authority in a form and manner acceptable to it.

☐ the tables related to the nucleotide and/or amino acid sequence listing, if in electronic form only, do not comply with the technical requirements provided for in Annex C-bis of the Administrative Instructions.

☐ See Supplemental Box for further details

# INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/US20/04028831

## Box No. IV Lack of unity of invention

1. ☒ In response to the invitation to restrict or pay additional fees the applicant has, within the applicable time limit:

- ☒ restricted the claims.
- ☐ paid additional fees.
- ☐ paid additional fees under protest, and, where applicable, the protest fee
- ☐ paid additional fees under protest but the applicable protest fee was not paid
- ☐ neither restricted the claims nor paid additional fees

2. ☐ This Authority found that the requirement of unity of invention is not complied with and chose, according to Rule 68.1, not to invite the applicant to restrict or pay additional fees.

3. This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is:

- ☐ complied with.
- ☒ not complied with for the following reasons:

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1. In order for all inventions to be examined, the appropriate additional examination fees must be paid.

Group I, claim(s) 1-50, drawn to a method of forming a tubular liner within a preexisting structure.

Group II, claim(s) 119-122, drawn to an expandable tubular member.

Group III, claim(s) 123-126, drawn to an expandable tubular member.

Group IV, claim(s) 127-130, drawn to a method of radially expanding and plastically deforming a tubular assembly.

Group V, claim(s) 137, 138 and 140, drawn to a method of manufacturing a tubular member.

The inventions listed as Groups I-V do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:  
 The special technical feature of the claims of Group I is a predetermined portion of the tubular assembly having a lower yield point than another portion thereof prior to the radial expansion and plastic deformation of the tubular assembly.  
 The special technical feature of the claims of Group II is the expandability coefficient of the expandable tubular member being greater than the expandability coefficient of another portion thereof.  
 The special technical feature of the claims of Group III is the tubular member having a higher ductility and a lower yield point prior to a radial expansion and plastic deformation than after the radial expansion and plastic deformation.  
 The special technical feature of the claims of Group IV is the use of less power to radially expand each unit length of the first tubular member than to radially expand each unit length of the second tubular member.  
 The special technical feature of the claims of Group V is the tubular member being processed after it has been positioned within a preexisting structure until it is characterized one or more final characteristics.  
 Inventions of Groups I-V lack unity because they do not rely on the same special technical feature as pointed out above.

4. Consequently, this report has been established in respect of the following parts of the international application:

- ☐ all parts
- ☒ the parts relating to claims Nos. 1-50

# INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.  
PCT/US20/04028831

## Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

### 1. Statement

Novelty (N)	Claims <u>1-50</u>	YES
	Claims <u>NONE</u>	NO
Inventive Step (IS)	Claims <u>1-50</u>	YES
	Claims <u>NONE</u>	NO
Industrial Applicability (IA)	Claims <u>1-50</u>	YES
	Claims <u>NONE</u>	NO

### 2. Citations and Explanations (Rule 70.7)

Claims 1-50 meet the criteria set out in PCT Article 33(2)-(3), because the prior art does not teach or fairly suggest a method of forming a tubular liner within a pre-existing structure as claimed and wherein prior to the radial expansion and plastic deformation of the tubular assembly, a first portion of the tubular assembly has a lower yield point than a second portion of the tubular assembly.

Claims 1-50 meet the criteria set out in PCT Article 33(4), and thus the claimed invention has industrial applicability because the subject matter claimed can be made or used in industry.

----- NEW CITATIONS -----

**CHAPTER II**  
**PCT TELEPHONE MEMORANDUM**  
**FOR**  
**LACK OF UNITY OF INVENTION**

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PCT No.: PCT/US20/04028831

Examiner: Hoang Dang

Attorney spoken to: Todd Mattingly

Date of call: 09 January 2007

- ☐ Amount of payment approved:
- ☐ Deposit account number to be charged:
- ☐ Attorney elected to pay for ALL additional inventions
- ☐ Attorney elected to pay only for the additional inventions covered by

☐ Group(s):

-- encompassing --

☐ Claim(s):

☒ Attorney elected NOT to pay for any additional inventions, therefore, only the first claimed invention Group I, covered by Claim(s) 1-50 has been examined.

☒ Attorney was orally advised that there is no right to protest for any group not paid for.

☒ Attorney was orally advised that any protest must be filed no later than 1 Month from the mailing of the Opinion (Form PCT/IPEA/408) or the Final Report (Form PCT/IPEA/409).

**Time Limit For Filing A Protest**

Applicant is hereby given 1 Month from the mailing date of this Opinion/Final Report in which to file a protest of the holding of lack of unity of invention. In accordance with PCT Rule 68.3, applicant may protest the holding of lack of unity only with respect to the group(s) paid for.

**Itemized Summary of Claim Groupings:**

Please See Continuation Sheet

**Detailed Reasons For Holding Lack of Unity of Invention:**

Please See Continuation Sheet

*Note: A copy of this form must be attached to the Opinion/Final Report.*

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## ATTACHMENT TO CHAPTER II PCT TELEPHONE MEMORANDUM FOR LACK OF UNITY OF INVENTION

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### Itemized Summary of Claim Groupings:

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1. In order for all inventions to be examined, the appropriate additional examination fees must be paid. Group I, claim(s) 1-50, drawn to a method of forming a tubular liner within a preexisting structure. Group II, claim(s) 119-122, drawn to an expandable tubular member. Group III, claim(s) 123-126, drawn to an expandable tubular member. Group IV, claim(s) 127-130, drawn to a method of radially expanding and plastically deforming a tubular assembly. Group V, claim(s) 137, 138 and 140, drawn to a method of manufacturing a tubular member.

### Detailed Reasons For Holding Lack of Unity of Invention:

The inventions listed as Groups I-V do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: The special technical feature of the claims of Group I is a predetermined portion of the tubular assembly having a lower yield point than another portion thereof prior to the radial expansion and plastic deformation of the tubular assembly. The special technical feature of the claims of Group II is the expandability coefficient of the expandable tubular member being greater than the expandability coefficient of another portion thereof. The special technical feature of the claims of Group III is the tubular member having a higher ductility and a lower yield point prior to a radial expansion and plastic deformation than after the radial expansion and plastic deformation. The special technical feature of the claims of Group IV is the use of less power to radially expand each unit length of the first tubular member than to radially expand each unit length of the second tubular member. The special technical feature of the claims of Group V is the tubular member being processed after it has been positioned within a preexisting structure until it is characterized one or more final characteristics. Inventions of Groups I-V lack unity because they do not rely on the same special technical feature as pointed out above.

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*Note: A copy of this form must be attached to the Opinion/Final Report.*